



**RESEARCH
 PROTOCOLS**

**Economic and Soil Health Impacts of Grazing
 Cover Crops**

Objective: Determine the impact of grazing cover crops mixes on the 1) economics and 2) soil health in row-crop fields.

Hypothesis: Grazing of cover crops will improve economics and soil health in row crop fields.

Farmer-Cooperator will:

- Take photos throughout the project and keep in contact with PFI with updates and questions.
- **June - September 2019 and 2020:** plant cover crop(s) of choice. PFI staff is available to discuss recommendations as requested. Record what cover crop(s) were seeded on which fields, field size, seeding date, rate, method and costs.
- **Fall 2019 and 2020:** graze cover crop if biomass growth and weather allow.
- **Spring 2020 and 2021:** graze cover crop if biomass growth and weather allow.
- When grazing cover crops, keep track of animal moves and what forage/crops/residue is present and note the cover crop height at onset of grazing. Record number of animals, average animal weight, dates animals moved into and out of each field, paddock size and hours of labor attributed to grazing.
- **Fall 2020 and 2021:** record cash crop yield from each of the three plots.
- Terminate cover crop with preferred method. Record costs associated with termination. If needed, discuss termination recommendations with PFI staff.
- Take soil health samples from three locations in each plot twice per year, once before grazing in the fall and once after grazing in the spring. Three samples should be taken at each location, for a total of nine samples. Samples should be taken within the same soil type at a 6-in. depth and sent to AgSource Labs in Ellsworth, IA for a **routine** soil health analysis. GPS these locations in order to sample from the same place each time.
- Turn in all info and data pertinent to this trial to Practical Farmers of Iowa by the end of the project.

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| Grazed Cover Crop (treatment) | Ungrazed Cover Crop (treatment) | No Cover Crop Grazing (control) |
| Fall 2019-Spring 2021 | | |

Practical Farmers of Iowa will:

- Help set up trial protocol, monitor progress of project and provide support when needed.
- Pay for AgSource soil health samples
- Reimburse sampling costs
- Work with each farmer to complete an economic and soil health analysis.
- Publish results in a PFI research report, on PFI website and potentially other outlets.
- Provide \$25/acre cost-share on acres enrolled each year; up to \$10,000.
- Provide \$550 honorarium after data is submitted each year of the project.

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